

SOFTWARE HELP

YOUR EXPERTS

Contact Software Help for software advice and answers

Kay Ewbank

Database developer and productivity expert Kay Ewbank offers help with office applications.



Ben Pitt

Professional musician and keen photographer Ben Pitt gives advice on using creative software.



softwarehelp@computershopper.co.uk

Changing the tempo ruins my samples

Q I'm using Cakewalk Sonar's loop feature to create drum tracks out of sample loops, but the sound quality deteriorates badly when I stray too far from the original tempo of the sample, producing lots of stutters and glitches in the audio. How can I avoid this?

Alan Kimber

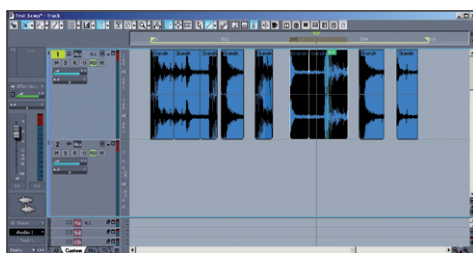
A There are two ways to adjust the tempo of an audio sample. One is simply to play it faster or slower, which is akin to playing a record or tape at different speeds. Playing a recording faster will make it shorter and also raise its pitch. The alternative is to time-stretch it. This process chops the sample up into very small slices and repeats or discards them as necessary to make the loop longer or shorter. The benefit of this is that the pitch remains unchanged, which is useful when working with pitched instruments such as a voice or guitar, but is arguably less important for unpitched sounds such as drum loops.

Time-stretching algorithms are increasingly sophisticated, and many offer different settings depending on the type of audio you are stretching to produce the best results. However, unwanted artefacts such as glitches and timing errors are inevitable, particularly when stretching by large amounts.

Unfortunately, Sonar doesn't provide a simple way of applying the former technique. Instead, it offers independent controls for adjusting the tempo and pitch of samples using time-stretching. However, it isn't too hard to apply both transformations by equivalent amounts, recreating the effect of playing a tape faster or slower to avoid introducing artefacts.

Start by locking the loop to your chosen tempo: double-click to open it and type L. Sonar will guess how many beats there are in your loop – normally four – so adjust this if necessary under Beats In Clip. When you have done this, the Orig. BPM display will give you an accurate reading of the loop's original tempo.

To get rid of artefacts, you now need to apply a pitch shift that corresponds to the change in tempo. This is just a matter of maths using the sample's original tempo and your project's tempo, but unfortunately it's quite nasty maths involving logarithms, so we recommend that you use the online calculator at www.thewhippinpost.co.uk/tools/tempo-pitch-calculator.htm. In our example, we have taken a 90BPM loop and used it at 65BPM, which gives us a pitch shift of -5.63 semitones. Back in Sonar, we insert this figure into the Pitch field for the sample. However, the Pitch setting is broken up into one value for semitones and another for cents (hundredths of a semitone), with the latter only varying from -50 to +50. So to achieve -5.63 semitones we must use -6 semitones followed by +37 cents.



▲ If a job's worth doing... slicing up individual drum hits manually is laborious but it gets the best results



▲ Sonar can adjust the tempo of a loop to fit your track, but you must adjust its pitch manually to avoid artefacts

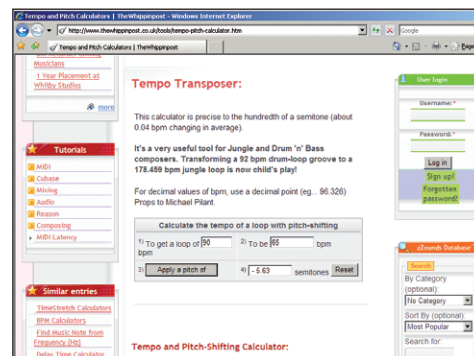
Cubase users face exactly the same problem – even down to the +/-50 cents predicament – and can follow the same procedure, adjusting the pitch shift in the Event Infoline on the main Arrange window. Some other music-production software makes the task much easier. Ableton Live includes various time-stretch options, including Re-Pitch, which automatically adjusts the pitch to match the tempo adjustment.

If you want the best of both worlds – to change the tempo and not the pitch but without using time-stretching – it's possible to do so by chopping the loop into individual drum hits. This technique was introduced by an application called Propellerhead ReCycle, but is now available in various other guises, including Sonar's AudioSnap feature. However, we find AudioSnap a little unwieldy, and its complexity is overkill for simple tasks. Therefore, for short loops we recommend chopping them up manually.

Temporarily set the project's tempo to that of the original sample, turn off Snap to Grid (by typing N) and carefully chop the sample at the start of each visible drum hit using the Split Tool (C). Afterwards, each slice will play at its original pitch and speed, but its position will follow any tempo adjustments you make.

Increasing the tempo with this technique generally produces flawless results, but slowing it down will result in silence between the slices. This won't be a problem for dry, staccato drum loops, but busier or more reverberant ones may sound a little odd.

To fix this, try dragging the start point of each slice backwards to fill the gaps. This will repeat the tail ends of each slice, which may cause a slight glitch, but these tails are the quieter parts of the loop, so the glitches shouldn't be noticeable in the context of a mix. **BP**



▲ The Tempo Transposer can calculate the corresponding change in pitch for a change in tempo



Emailing digital photos

Q I need to email a large collection of digital photos to a friend – 23 images totalling 75MB. I know that our broadband connections are fast enough, but his email account won't accept the attachments. Is there a workaround?

Kevin, Hampshire

A Most email services allow for attachments of around 10MB to 20MB, so you could try sending the images in smaller groups, but this is quite a tedious process. A much better solution is to bundle them into a single file using Zip compression and send it through a file-delivery service such as YouSendIt.

Zip compression won't make your attachments any smaller, because JPEG images are already compressed, but it's much easier to send one big file than lots of little ones. You don't need a copy of WinZip to create a Zip folder. Simply right-click inside a folder in Windows Explorer and select New, Compressed (zipped) Folder. Rename it, being careful to



▲ Send files up to 100MB across the internet for free with YouSendIt

retain the .zip extension, then simply drop your image files on to the folder to add them.

Visit www.yousendit.com, enter your email address and that of your recipient, and browse to the Zip file you created. YouSendIt is free for files up to 100MB, but if you need to send files that are a little larger, you could always send them as two separate Zip files. **BP**

How can I access Publisher's clip art without net access?

Q My neighbours have just bought their first computer. It came with Office 2003 installed, but they chose not to request internet access.

Now they want to use Microsoft Publisher's clip art. When I search for clip art on my version of Publisher 2003, Clip Organizer immediately takes me online, and the graphics appear. However, when my neighbours try this on their offline PC, they get the message "none found", even though there are dozens of images under Program Files\Microsoft Office\Clip art\PUB60COR.

I have tried adding the images to Clip Organizer manually, but this hasn't worked. Any suggestions, please?

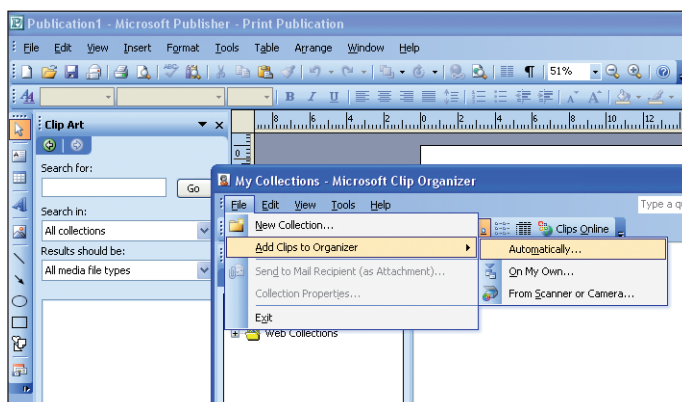
Howard Ravenscroft

A Unfortunately, the offline clip art you've found in Publisher isn't like normal clip art. It can be used only by the Publisher wizards. This may seem

ludicrous, but it's true. The only solution I can suggest is that your neighbours get hold of a collection of third-party clip art. *Computer Shopper* regularly includes such collections on its cover discs. Your neighbours will be able to add any such clip art to the Clip Organizer in the usual way.

You can add clip art files to Publisher from your hard disk by using the main Clip Organizer window. From the File menu, choose Add Clips to Organizer. You then get a choice of Automatically (if you want Clip Organizer to find the clips) or On My Own (if you know where the clips are).

If you know that there is clip art elsewhere on your computer, you can ask Publisher to find it directly. From the Insert menu, choose Picture, then Clip Art. The Insert Clip Art task pane will appear. In its Search box, enter the filename of the clip you want to insert. If you don't know the exact name, you can use wildcard characters – for instance, using an asterisk as a substitute for any number of characters. **KE**



◀ Use Publisher's Clip Organizer to add your own clip art files

Adding page numbers by default

Q I use Word 2003 and almost always want to number my documents in the centre of the page at the bottom in Times New Roman 10, with no number appearing on the first page. For years I have set this up manually for each document using the Insert/Page Numbering option. Surely I can build this preference into my system so that I don't have to repeat this chore constantly? No doubt I have missed an option lurking somewhere.

Douglas d'Enno

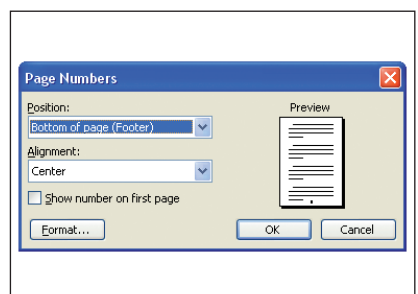
A You can add page numbers to a template and create your new documents based on that. When you create a document based on a template, it inherits characteristics, such as page numbering, from the template.

If you almost always want to add page numbers to your documents, simply add them to the default Normal.dot template. This will add page numbers to all blank documents, which are those you create by clicking the New Blank Document button on Word's Standard toolbar rather than selecting a special template. To do this you must open and edit the Normal.dot file. Choose Open from the File menu, then navigate to C:\Documents and Settings\username\Application Data\Microsoft\Templates (replacing username with your username, obviously). If no templates are shown, click the arrow next to the 'Files of type' box and select Document Templates.

Double-click the Normal.dot file to open it and add the page numbers as you would normally. From the Insert menu, choose Page Numbers. Set the alignment to Center, and untick the box 'Show number on first page'.

Save your Normal.dot template and close it. From now on, you should find that Word inserts and displays page numbers correctly on all your new blank documents.

If Normal.dot is renamed, damaged or moved, Word automatically creates a new version of the template next time you start the program. This new version, which uses the original default settings, will not include any of the changes, additions or customisations you have made. For this reason, you may want to keep a backup copy of your fine-tuned Normal.dot file on a memory stick. **KE**



▲ Edit Normal.dot to number pages by default

Excel's Vlookup is v confused

Q I'm trying to arrange a small knockout tennis contest using Excel. I have the players' names and their club membership numbers on my spreadsheet. To decide who plays who in the matches, we draw the membership numbers from a hat. I want to be able to enter the numbers into my spreadsheet and get it to output the names in the fixture list.

I have tried to achieve this using a VLOOKUP function. However, when I look at the resulting list, the names are all wrong. I have checked the function I'm using and it looks absolutely correct. The lookup cell is correct, the table range is correct and the column to return is correct. What is wrong?

John Telford

A If you've entered the membership numbers of the players in column A, the forenames in column B and the surnames in column C, your formula will read something like this:

=VLOOKUP(E5,\$A\$4:\$C\$11,2)

This function instructs Excel to take the number entered in cell E5, find it in the leftmost column of the table from A4 to C11, and return the value of the cell in column C of the same row.

For VLOOKUP to work, you must sort the table. The mistake you've made is to order the players according to their surname. Instead, you should have sorted them into ascending order based on their membership number. This is easily remedied by using the Data Sort function on the Data menu. Select the table of values (including the headings) and select Data Sort. Use the drop-down box in the 'Sort by' window to select the membership number column. Make sure the value box is set to Ascending and click OK. This will sort the table, and you should find that the VLOOKUP function works correctly.

Sorting is necessary because VLOOKUP is written very simply to scan down a series of numbers; it is not set up to hunt around a table until it finds the matching value. You need to make life easy for it by arranging the index column in ascending order. Once you have done that, it will be happy. KE

Membership No	Forename	Surname
1	James	Jones
2	Steve	Thorpe
3	Alan	Smith
4	John	Telford
5	Mark	Thompson
6	John	Hatch
7	Peter	Walters
8	Dennis	Ashton

▲ Sort the data in Excel to make sure the VLOOKUP function works as expected

Removing mistakes from Word's custom dictionaries

Q I've accidentally added an incorrectly spelt word to the spelling dictionary in Microsoft Word. How can I remove it?

A Henderson

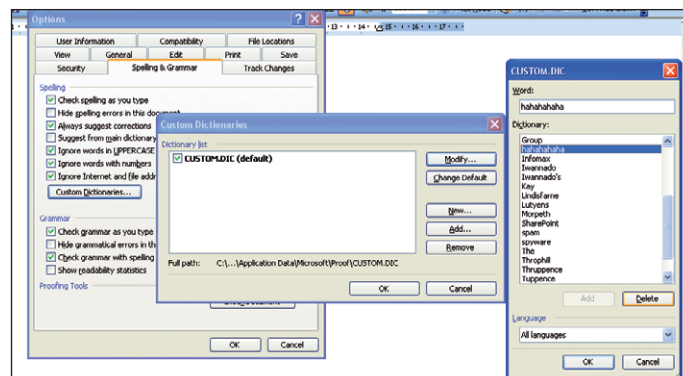
A Words that you add during a spellcheck, or by right-clicking an underlined word and choosing Add to Dictionary, are stored in a file called a custom dictionary. You can view and edit your custom dictionary whenever you like. In fact, it's a good idea to look at it every now and then because it's amazing what you end up adding without really thinking about it.

To edit the custom dictionary in Microsoft Word, go to the Tools menu and choose Options, Spelling & Grammar. On that tab, you'll see a Custom Dictionaries button. Click on it, and if there are multiple dictionaries

listed, click on the one you want. If you've just been using Word normally, you'll see only one dictionary – Custom.Dic.

Click the Modify button, and you'll see the list of words currently in the dictionary. You can add new words by typing them, one at a time, into the Word box, clicking Add each time you've completed a word. To remove erroneous words, simply scroll through the list of words, select the one you've misspelt and click Delete. You can't edit words in the list; if you see something you want to edit, delete it first and then add the correct spelling.

The custom dictionary allows you to expand Word's vocabulary with words that are perhaps too specialist to appear by default. If you see a word that Word has incorrectly identified as misspelt while you're carrying out a Spelling and Grammar check, you can add it to the custom dictionary by clicking Add to Dictionary.



◀ Delete misspelt words from Word's custom dictionary

Resizing PowerPoint text and graphics in proportion

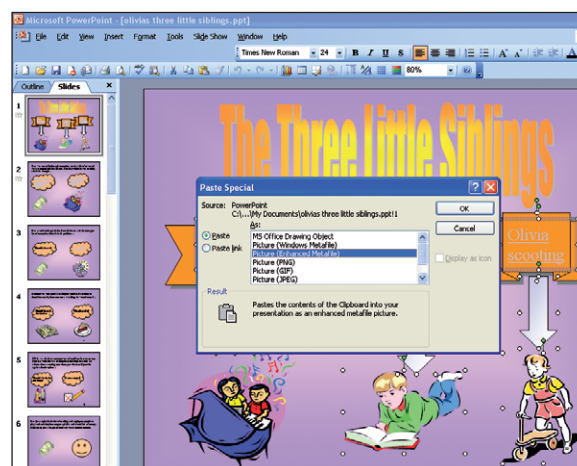
Q I draw lots of diagrams in PowerPoint, and sometimes I get the scale wrong. When I try to make the diagram smaller or larger, though, the font in the text boxes doesn't resize in proportion with the rest of the diagram. I've managed to fix this by choosing each text box in turn and selecting the correct font size, but it takes a long time and is rather frustrating. Is there an easier way?

Pete Anderson

A The solution is to convert your diagram from a collection of different items into a single graphic. Select all the shapes and text boxes that make up your diagram, then choose Edit, Copy.

Next, choose Edit, Paste Special, and from the options

you're offered as the Paste type, choose Enhanced Metafile. You should now find that all the elements remain in proportion when you adjust the scale up or down. KE



▲ Converting your PowerPoint diagram to a metafile enables you to scale the fonts automatically as you change the diagram's scale

Dealing with apostrophes in Access

Q I have a Microsoft Access form with a combo box that displays a list of people whose details are on the database. When the user selects a person's record from the list, the information associated with that person, such as their address and telephone number, is loaded into the form.

This system worked well until I added the record of a person with the Irish name O'Shaughnessy to the database. Now whenever I try to select that person's name, I get an error message because of the apostrophe in the surname:

"Run-time error '3077'.
Syntax error (missing operator)
in expression."

Clicking on the Debug button takes me to the AfterUpdate code that loads the person's details. The highlighted statement is:

```
rs.FindFirst "[Exhibitor] = '" &
Me![Combo1] & "'"
```

How can I modify my code to avoid this error and allow the database to display the required details?

Bryan Pinches

A If you substitute the problem name for Me![Combo1], you'll see what's going wrong. You're asking for a match on:

```
[Exhibitor] = 'O'Shaughnessy'
```

This doesn't make sense, because Access looks for a string enclosed in single quotes, finds 'O', and wonders what the rest of the line is all about!

The problem is that an apostrophe has a special meaning: it signals the start or end of a string. You want to override this special meaning and simply insert the apostrophe character. This act of overriding a special meaning is called 'escaping'. In Access you escape an apostrophe by adding a second apostrophe immediately after. So you want your match to evaluate to:

```
[Exhibitor] = 'O''Shaughnessy'
```

Access's syntax for escaping an apostrophe doesn't make any sense, but it works, and that's all that matters. All you need to do is add a test to your code that looks for single quotes and adds another single quote where it finds one.

The InStr function returns the position of string 2 within string 1, or returns 0 if string 2 isn't present in string 1. The code below uses InStr to find a quote within the value of combo1. If a quote is found, the left-hand part of the



▲ insert an extra quote in the string to search for text containing a single quote

string is joined with an extra quote and the right-hand part of the string is added to the end. **KE**

```
posquote = InStr(1, Me!combo1, "'")
If posquote > 0 Then
    findtext = "[CompanyName] = '"
    findtext = findtext &
        Left(Me!combo1, posquote) &
        "' "
    findtext = findtext & Right(Me!
        [combo1], Len(Me!combo1)
        - posquote) & "' "
Else
    findtext = "[CompanyName] = '" &
        Me!combo1 & "' "
End If
rs.FindFirst findtext
```

Vista broke my error handlers

✉ I'd like to alert fellow Office developers to a problem that drove me wild for some time before I discovered the solution. Hopefully, my experience will prevent them wasting as much time as I did.

I have created a number of Microsoft Access applications that have run successfully for many years in a business environment with multiple users. However, when I tried to run these applications on a new Windows Vista Business Edition machine, the error handling in the applications stopped working.

The machine had an appropriate specification, so I knew the problem wasn't the hardware. And because the applications had run happily for so long, I knew there was nothing essentially wrong with the code.

A typical error handler I use is:

```
On Error Resume Next
'
'Select the Open Outlook
Application
Set objOutlook = GetObject(,
    "Outlook.Application")
'
'If the Outlook Application is not
open, an error will occur: so
handle it here
If Err <> 0 Then
    Err.Clear
    'Outlook wasn't open, so create
    a new Outlook session.
```

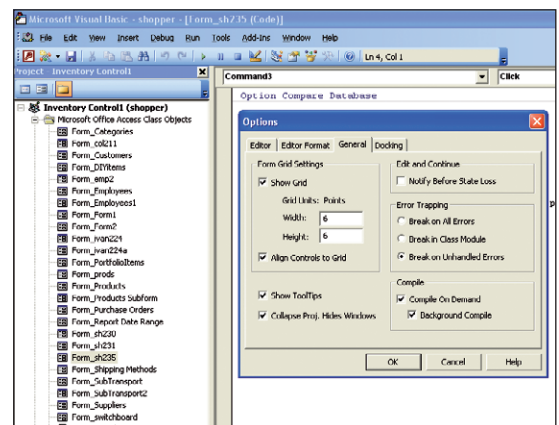
```
Set objOutlook =
CreateObject("Outlook.
Application")
Set Profile = objOutlook.
GetNamespace("MAPI")
Profile.Logon
End If
```

This code snippet generates an error if the Outlook application isn't already open. When this happens, the On Error trap is supposed to handle it and execute the section of the code that opens Outlook. This worked on previous versions of Windows, but with Vista the error causes the code to stop running and present an 'End' or 'Debug' dialog box.

This problem stumped me for a long time before I discovered the answer. I have installed Microsoft Office 2003 many times before on Windows NT 4 and Windows XP, and in each case the Visual Basic Editor's Options, General tab, Error Trapping setting has been set to 'Break on Unhandled Errors'. I have always assumed this to be the default setting.

When I installed Office on Windows Vista, the option to 'Break on All Errors' was set instead. I'm still wondering why the default setting has changed just because I've installed the program on a different operating system. Perhaps you know why. In the meantime, I hope I've saved other readers wasted time.

Geoff Way



▲ Change the VB Editor error trapping setting to Break on Unhandled Errors to avoid unnecessary halting with Vista

A The only reason I can suggest is that Microsoft has moved to a more cautious set of defaults. Throughout its range of products, the company is changing the default settings so that the default behaviour is the safest. If you install a server operating system, for example, most of the services are switched off by default. If you want to use them, you have to turn them on manually.

It does seem strange that a desktop application would change its default behaviour simply because it was installed on a different operating system, but that's the only explanation I've been able to come up with. This issue is well worth pointing out to other readers, though, so thanks, Geoff. **KE**